

ABSTRACT

A carrier is used to carry a liquid, and a high voltage is applied between a discharge end of the carrier and an opposed electrode to emit ionized liquid particles. The carrier has a liquid collecting end opposite to the discharge end to feed the steam of the liquid from a steam generator, condensing the liquid therearound, and feeding the condensed liquid to the discharge end.

Accordingly, even when the liquid contains cations such as those of Ca and Mg, the steam of the liquid can extremely reduce the content of these impurities, avoiding the precipitation of the impurities at the discharge end of the carrier to assure stable electrostatic atomization.